

### **Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

### **Listing of Claims:**

1. (Currently Amended) Bone anchoring element comprising a tubular implant to be inserted into bone tissue for anchoring a prosthetic component (TK) located outside the bone, a component which is open at one end thereof intended to be inserted into the bone tissue while the other end intended to be directed towards portions located externally of the bone tissue ~~located portions~~ is closed by a compact impermeable end wall portion with attachment for the prosthetic component on the outside thereof the lumen extending from the open end through the total implant to the end wall portion so ~~that the lumen after insertion of the implant into the bone tissue includes at least the entire portion of the implant which is intended to be anchored in the bone tissue,~~ characterized in that wherein the implant has a compact impermeable side wall with a stop mark for defining an end position for the implant at insertion into the bone tissue, and that the lumen of the implant also includes a cavity in the end wall portion open towards the lumen ~~so that the lumen has such an extension that it after insertion of the implant into the bone also will be located above the bone level established around the implant.~~

2. (Currently Amended) Bone anchoring element according to claim 1 wherein the stop mark is formed by ~~an inside or outside~~ a shoulder[, ] which can be engaged with the bone tissue.

3. (Currently Amended) Bone anchoring element according to claim 2 wherein the shoulder is formed by the ~~inside of the~~ end wall portion.

4. (Currently Amended) Bone anchoring according to claim 3, wherein the shoulder is formed ~~by~~ at said one end.

5. (Currently Amended) Bone anchoring element according to ~~any of claims 1 to 4~~ claim 1, wherein the side wall forms threads on the outside or inside thereof.

6. (Currently Amended) Bone anchoring element according to claim 5 wherein the ~~existing outside and inside threads are synchronic macro or micro threads~~ have double entrances.

7. (Currently Amended) Bone anchoring element according to ~~claim 5 or 6~~ claim 1 wherein ~~the threads have double entrances~~ the outer and/or inner surface of the side wall has micro topography.

8. (Currently Amended) Bone anchoring element according to claim 1 wherein the ~~outer and/or inner surface of the side wall has micro topography~~ total potential bone contact surface is at least double the size of a compact implant having the same external measures.

9. (Currently Amended) Bone anchoring element according to claim 1 wherein ~~the lumen of the implant also includes a cavity located in the end wall portion open towards the lumen so that the lumen has such an extension that it after insertion of the implant into the bone also will be located above the bone level established around the implant which after insertion to the stop mark occupies a bone volume which is maximum 30 % of the bone volume occupied by a compact implant of corresponding length (height) and diameter~~.

10. (Currently Amended) Bone anchoring element according to ~~claim 9~~ wherein ~~the lumen above the bone level established around the implant has a surface which amounts to at least 20% of the total surface of the lumen~~ Bone anchoring according to claim 1 wherein the length (height) of the implant is substantially equal to the diameter.

11. (Currently Amended) Bone anchoring element according to claim 1 wherein ~~the total potential bone contact surface is at least double the size of a compact implant having the same external measures~~ the implant has a diameter, which is larger than its length (height).

12. - 16. (Cancelled)